

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

**INFORMATION DISCLOSURE
STATEMENT**

Docket Number:
52494/1904

Application Number
10/658,213

Filing Date
September 8, 2003

Examiner
Not Yet
Known

Art Unit
Not Yet Known

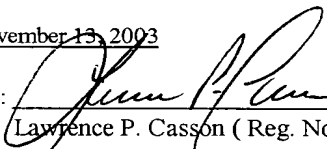
Invention Title
**IDENTIFICATION OF DIFFERENTIALLY
METHYLATED AND MUTATED NUCLEIC ACIDS**

Inventors
Hao-Peng Xu DUFFY

Address to:
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

I hereby certify that this correspondence is being deposited
with the United States Postal Service with sufficient postage
as first class mail in an envelope addressed to:
Commissioner for Patents, P.O. Box 1450, Alexandria, VA
22313-1450 on

Date: November 13, 2003

Signature: 

Lawrence P. Casson (Reg. No. 46,606)

1. In accordance with the duty of disclosure under 37 C.F.R. § 1.56 and in conformance with the procedures of 35 U.S.C. §§ 1.97 and 1.98 and M.P.E.P. § 609, attorneys for Applicants hereby bring the following references to the attention of the Examiner. These references are listed on the attached modified PTO Form No. 1449. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom. The filing of this Information Disclosure Statement and the enclosed PTO Form No. 1449, shall not be construed as an admission that the information cited is prior art, or is considered to be material to patentability as defined in 37 C.F.R. § 1.56(b).
2. A copy of each patent, publication or other information listed on the modified PTO form 1449 is enclosed.
3. It is believed that no fees are due in connection with this Information Disclosure Statement. However, should any fees be due, the Commissioner is authorized to charge Deposit Account No. 11-0600 for such fees. A copy of this communication is enclosed for charging purposes.

Dated: November 13, 2003

By: 

Lawrence P. Casson (Reg. No. 46,606)

KENYON & KENYON
One Broadway
New York, N.Y. 10004
(212) 425-7200 (telephone)
(212) 425-5288 (facsimile)
CUSTOMER NUMBER 26646



U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

**INFORMATION DISCLOSURE
STATEMENT**

Docket Number:
52494/1904

Application Number
10/658,213

Filing Date
September 8, 2003

Examiner
Not Yet
Known

Art Unit
Not Yet Known

Invention Title

**IDENTIFICATION OF DIFFERENTIALLY
METHYLATED AND MUTATED NUCLEIC ACIDS**

Inventors

Hao-Peng Xu DUFFY

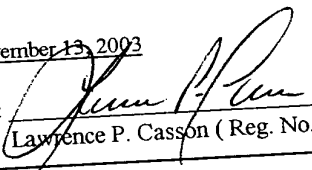
Address to:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

I hereby certify that this correspondence is being deposited
with the United States Postal Service with sufficient postage
as first class mail in an envelope addressed to:
Commissioner for Patents, P.O. Box 1450, Alexandria, VA
22313-1450 on

Date: November 13, 2003

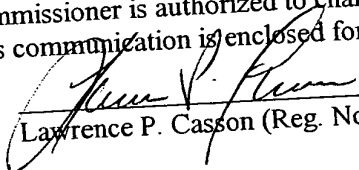
Signature:


Lawrence P. Casson (Reg. No. 46,606)

1. In accordance with the duty of disclosure under 37 C.F.R. § 1.56 and in conformance with the procedures of 35 U.S.C. §§ 1.97 and 1.98 and M.P.E.P. § 609, attorneys for Applicants hereby bring the following references to the attention of the Examiner. These references are listed on the attached modified PTO Form No. 1449. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom. The filing of this Information Disclosure Statement and the enclosed PTO Form No. 1449, shall not be construed as an admission that the information cited is prior art, or is considered to be material to patentability as defined in 37 C.F.R. § 1.56(b).
2. A copy of each patent, publication or other information listed on the modified PTO form 1449 is enclosed.
3. It is believed that no fees are due in connection with this Information Disclosure Statement. However, should any fees be due, the Commissioner is authorized to charge Deposit Account No. 11-0600 for such fees. A copy of this communication is enclosed for charging purposes.

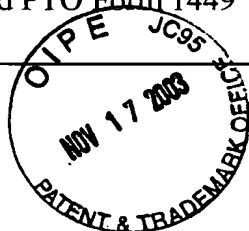
Dated: November 13, 2003

By:


Lawrence P. Casson (Reg. No. 46,606)

KENYON & KENYON
One Broadway
New York, N.Y. 10004
(212) 425-7200 (telephone)
(212) 425-5288 (facsimile)
CUSTOMER NUMBER 26646

INFORMATION DISCLOSURE STATEMENT BY APPLICANT Modified PTO Form 1449	Atty. Docket No. 52494/1904	Serial No. 10/658,213
	Applicant Hao-Peng Xu DUFFY	
	Filing Date September 8, 2003	Group Not Assigned



U. S. PATENT DOCUMENTS

EXAMINER INITIAL	PATENT NUMBER	PATENT DATE	NAME	CLASS	SUBCLASS	FILING DATE*
	5,856,094	Jan. 5, 1999	Sidransky et al.			
	5,846,712	Dec. 8, 1998	Baylin			
	5,811,238	Sep. 22, 1998	Stemmer et al.			
	5,786,146	Jul. 28, 1998	Herman et al.			
	5,756,668	May 26, 1998	Baylin et al.			
	5,552,277	Sep. 3, 1996	Nelson et al.			
	5,436,142	Jul. 25, 1995	Wigler et al.			
	5,871,917	Feb. 16, 1999	Duffy			

* - If pertinent

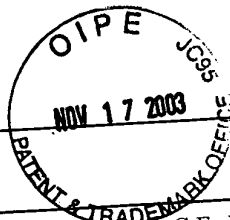
FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
	WO 98/56952 A1	Dec. 17, 1998	PCT			N/A	
	WO 98/54318 A1	Dec. 3, 1998	PCT			N/A	
	WO 98/05782 A1	Feb. 12, 1998	PCT			N/A	
	0 814 158	Dec. 29, 1997	EP			N/A	
	WO 97/46705 A1	Dec. 11, 1997	PCT			N/A	
	WO 97/45560	Dec. 4, 1997	PCT			N/A	

OTHER DOCUMENTS

EXAMINER INITIAL		AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.
		Belinsky, S.A., Nikula, K.J., Baylin, S.B. and Issa, J.P. (1996) Increased cytosine DNA-methyltransferase activity is target-cell-specific and an early event in lung cancer. Proc. Natl. Acad. Sci. U.S.A. 93:4045-4050

EXAMINER INITIAL		AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.
		Brattstrom, R., Lessnick, S.L., May, W.A. and Denny, C.T. (1995) Identification of target genes for the Ewing's sarcoma EWS/FLI fusion protein by representational difference analysis. Mol. Cell. Biol. 15:4623-4630
		Chang, Y., Cesarman, E., Pessin, M.S., Lee, F., Culpepper, J., Knowles, D.M. and Moore, P.S. (1994) Identification of herpesvirus-like DNA sequences in AIDS-associated Kaposi's sarcoma. Science 266:1865-1869
		Clark, S.J., Harrison, J. and Frommer, M. (1995) CpNpG methylation in mammalian cells. Nat. Genet. 10:20-27
		Costello, J.F., Berger, M.S., Huangm H.S. and Cavenee, W.K. (1996) Silencing of p16/CDKN2 expression in human gliomas by methylation and chromatin condensation. Cancer Res. 56:2405-2410
		Frommer, M., McDonald, L.E., Millar, D.S., Collis, C.M., Watt, F., Grigg, G.W., Molloy, P.L. and Paul, C.L. (1992) A genomic sequencing protocol that yields a positive display of 5-methylcytosine residues in individual DNA strands. Proc. Natl. Acad. Sci. U.S.A. 89:1827-1831
		Gonzalgo, M.L., Liang, G., Spruck, C.H. 3rd, Zingg, J.M., Rideout, W.M. 3rd and Jones, P.A. (1997) Identification and characterization of differentially methylated regions of genomic DNA by methylation-sensitive arbitrarily primed PCR. Cancer Res. 57:594-599
		Graff, J.R., Herman, J.G., Lapidus, R.G., Chopra, H., Xu, R., Jarrard, D.F., Isaacs, W.B., Pitha, P.M., Davidson, N.E. and Baylin, S.B. (1995) E-cadherin expression is silenced by DNA hypermethylation in human breast and prostate carcinomas. Cancer Res. 55:5195-5199
		Hakkarainen, M., Wahlfors, J., Myohanen, S., Hiltunen, M.O., Eskelinen, M., Johansson, R. and Janne, J. (1996) Hypermethylation of calcitonin gene regulatory sequences in human breast cancer as revealed by genomic sequencing. Int. J. Cancer 69(6):471-4
		Herman, J.G., Graff, J.R., Myohanen, S., Nelkin, B.D. and Baylin, S.B. (1996) Methylation-specific PCR: a novel PCR assay for methylation status of CpG islands. Proc. Natl. Acad. Sci. U.S.A. 93:9821-9826
		Herman, J.G., Jen, J., Merlo, A. and Baylin, S.B. (1996) Hypermethylation-associated inactivation indicates a tumor suppressor role for p15INK4B. Cancer Res. 56:722-727
		Horsthemke, B., Claussen, U., Hesse, S. and Ludecke, H.J. (1992) PCR-mediated cloning of HpaII tiny fragments from microdissected human chromosomes. PCR Methods Appl. 1:229-233
		Hillier et al., "The WashU-Merck Project", unpublished, 1/24/97, Database EST, EST Accession No. AA203189.
		Huang, T.H., Laux, D.E., Hamlin, B.C., Tran, P., Tran, H., Lubahn, D.B. (1997) Identification of DNA methylation markers for human breast carcinomas using the methylation-sensitive restriction fingerprinting technique. Cancer Res. 57:1030-1034
		Hubank, M. and Schatz, D.G. (1994) Identifying differences in mRNA expression by representational difference analysis of cDNA. Nucleic Acids Res. 22:5640-5648
		Huynh, H., Alpert, L. and Pollak, M. (1996) Silencing of the mammary-derived growth inhibitor (MDGI) gene in breast neoplasms is associated with epigenetic changes. Cancer Res. 56:4865-4870
		Issa, J.P., Zehnbaue, B.A., Civin, C.I., Collector, M.I., Sharkis, S.J., Davidson, N.E., Kaufmann, S.H. and Baylin, S.B. (1996) The estrogen receptor CpG island is methylated in most hematopoietic neoplasms. Cancer Res. 56:973-977
		Janeway, Jr. et al., "Immunobiology: the immune system in health and disease", Current Biology Ltd./Garland Publishing Inc., 1994, pp. 2:24, 2:41.
		Laird, P.W. and Jaenisch, R. (1994) DNA methylation and cancer. Hum. Mol. Genet. 3 Spec. No.:1487-1495



EXAMINER INITIAL	AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.
	Liang, G., Salem, C.E., Yu, M.C., Nguyen, H.D., Gonzales, F.A., Nguyen, T.T., Nichols, P.W. and Jones, P.A. (1998) DNA methylation differences associated with tumor tissues identified by genome scanning analysis. <i>Genomics</i> 53:260-268
	Lisitsyn, N., Lisitsyn, N. and Wigler, M. (1993) Cloning the differences between two complex genomes. <i>Science</i> 259:946-951
	Lisitsyn, N.A., Segre, J.A., Kusumi, K., Lisitsyn, N.M., Nadeau, J.H., Frankel, W.N., Wigler, M.H. and Lander, E.S. (1994) Direct isolation of polymorphic markers linked to a trait by genetically directed representational difference analysis. <i>Nat. Genet.</i> 6:57-63
	Little, M. and Wainwright, B. (1995) Methylation and p16: suppressing the suppressor. <i>Nat. Med.</i> 1:633-634
	Loebel, D.A.F. and Johnston, P.G. (1996) Methylation analysis of a marsupial X-linked CpG island by bisulfite genomic sequencing. <i>Genome Res.</i> 6:114-123
	McGrew, M.J. and Rosenthal, N. (1993) Quantitation of genomic methylation using ligation-mediated PCR. <i>Biotechniques</i> 15:722-729
	Merlo, A., Herman, J.G., Mao, L., Lee, D.J., Gabrielson, E., Burger, P.C., Baylin, S.B. and Sidransky, D. (1995) 5' CpG island methylation is associated with transcriptional silencing of the tumour suppressor p16/CDKN2/MTS1 in human cancers. <i>Nat. Med.</i> 1:686-692
	Parrish, J.E. and Nelson, D.L. (1993) Methods for finding genes. A major rate-limiting step in positional cloning. <i>Genet. Anal. Tech. Appl.</i> 10:29-41
	Singer-Sam, J., LeBon, J.M., Tanguay, R.L. and Riggs, A.D. (1990) A quantitative HpaII-PCR assay to measure methylation of DNA from a small number of cells. <i>Nucleic Acids Res.</i> 18:687
	Steigerwald, C.D., Pfeifer, G.P. and Riggs, A.D. (1990) Ligation-mediated PCR improves the sensitivity of methylation analysis by restriction enzymes and detection of specific DNA strand breaks. <i>Nucleic Acids Res.</i> 18:1435-1439
	Wieland, I., Bolger, G., Asouline, G. and Wigler, M. (1990) A method for difference cloning: gene amplification following subtractive hybridization. <i>Proc. Natl. Acad. Sci. U.S.A.</i> 87:2720-2724
	Willison, K. (1991) Opposite imprinting of the mouse Igf2 and Igf2r genes. <i>Trends Genet.</i> 7:107-109
	Xu, H.P., Yanak, B.L., Wigler, M.H. and Gorin, M.B. (1996) New polymorphic markers in the vicinity of the pearl locus on mouse chromosome 13. <i>Mamm. Genome</i> 7:16-19

Examiner	Date Considered
EXAMINER: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	